AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1.-5. (Canceled)

6. (Previously Presented) The treatment method of the semiconductor wafer according to claim 32,

wherein the third solution is an alkaline solution including at least one of choline, ammonia water and KOH.

7. (Canceled)

8. (Currently Amended) A treatment method of ~~the~~ a semiconductor wafer, comprising:

treating the semiconductor wafer in a first solution including at least one of NH_4F and HF whose concentration is equal to or more than 33% and less than 49%; and

treating the semiconductor wafer in a second solution including at least one of an alkali, an oxidative acid and HF.

9. (Previously Presented) A method of inspecting a semiconductor wafer which comprises a film constituting a device structure including a device pattern and which may have a crystal defect, the method comprising:

removing said film with a chemical solution to expose the crystal surface of the semiconductor wafer;

selectively removing a surface layer of the semiconductor wafer by selective etching without dicing to bring the crystal defect into view; and

quantitatively evaluating the crystal defect.

10. (Original) The method of inspecting the semiconductor wafer according to claim 9,

wherein said chemical solution includes a first solution having at least one kind of an oxidative acid and an oxidizing agent and a second solution having at least one of HF and NH_4F.

11. (Currently Amended) The method of inspecting the semiconductor wafer according to claim 9,

wherein said chemical solution includes a first solution having at least one of NH_4F and HF whose concentration is ~~33% to 49%~~ equal to or more than 33% and less than 49% and a second solution having at least one of an alkali, an oxidative acid and HF.

12. (Original) The inspection method of the semiconductor wafer according to claim 9, further comprising:

removing contaminants produced on a surface of the semi-conductor wafer due to said selective etching.

13. (Original) The inspection method of the semiconductor wafer according to claim 9, further comprising:

cleaning the semiconductor wafer so as to remove particles produced on the surface of the semiconductor wafer in the treatments up to said selective etching.

14. (Previously Presented) The inspection method of the semiconductor wafer according to claim 9,

wherein removing said film includes at least one execution of removing said film with a chemical solution composed of HF, H_2O and an interfacial active agent, and of removing residuals through etching by use of H_2SO_4, H_2O_2 and H_2O.

15. (Currently Amended) The inspection method of the semiconductor wafer according to claim 9,

wherein said selective etching is carried out using one of a solution of ~~chronic~~ chromic oxide (VI), fluorine, nitric acid, acetic acid and copper nitrate (II) trihydrate, a solution of ~~chronic~~ chromic oxide (VI) and fluorine, and a solution of fluorine, nitric acid and acetic acid.

16. (Original) The inspection method of the semiconductor wafer according to claim 9,

wherein quantitatively evaluating the crystal defect includes:

creating in advance a reference area including a defect-free device pattern on the semiconductor wafer; and

detecting the crystal defect by obtaining an image to be evaluated which is an image of an area to be evaluated and a reference image which is an image of said reference area and comparing the image to be evaluated with the reference image.

17. (Original) The inspection method of the semiconductor wafer according to claim 16,

wherein said defect-free device pattern is formed by reducing stress.

18. (Original) The inspection method of the semiconductor wafer according to claim 17,

wherein a gate conductor or a contact is formed in the area to be evaluated and said stress is reduced by forming no gate conductors and no contacts in said reference area.

19. (Original) The inspection method of the semiconductor wafer according to claim 16,

wherein said area to be evaluated is formed in a process including irradiation of charged particles, and said defect-free device pattern is formed by avoiding or reducing damage due to irradiation of the charged particles in said reference area.

20. (Original) The inspection method of the semiconductor wafer according to claim 9, further comprising:

creating in advance a reference semiconductor wafer having a defect-free area in which the same pattern as the device pattern formed in the semiconductor wafer to be inspected is formed;

wherein quantitatively evaluating the crystal defect includes detecting the crystal defect by obtaining an image to be evaluated which is an image of an area to be evaluated and a reference image which is an image of the reference area, and comparing said image to be evaluated with said reference image.

21. (Original) The inspection method of the semiconductor wafer according to claim 9, further comprising:

using a reference semiconductor wafer having a defect-free reference area in which the same pattern as the device pattern formed in the semiconductor wafer to be inspected is formed, so as to obtain in advance and store image information of the reference area;

wherein quantitatively evaluating the crystal defect includes obtaining an image to be evaluated which is an image of an area to be evaluated and a reference image which is an image of the reference area, and comparing said image to be evaluated with said reference image to detect the crystal defect.

22. (Original) The inspection method of the semiconductor wafer according to claim 9, further comprising:

exposing the semiconductor wafer to ultrasonic waves when removing said film with the chemical solution.

23. (Previously Presented) A method of developing a semiconductor device, comprising:

removing a film with a chemical solution, said film being formed on a crystal surface of a semiconductor wafer which may have a crystal defect, and said film constituting a device structure including a device pattern, so that the crystal surface of the semiconductor wafer is exposed;

selectively removing a surface layer of the semiconductor wafer by selective etching to bring the crystal defect into view,

quantitatively evaluating the crystal defect over the entire semiconductor wafer; and

optimizing a manufacturing process for the semiconductor device or the shape of said device pattern on the basis of information on the crystal defect obtained from said quantitative evaluation so that the crystal defect is reduced.

24. (Original) The method of developing the semiconductor device according to claim 23,

wherein said chemical solution includes a first solution having at least one kind of an oxidative acid and an oxidizing agent and a second solution having at least one of HF and NH4F.

25. (Previously Presented) The method of developing the semiconductor device according to claim 23,

wherein said chemical solution includes a first solution having at least one of NH4F and HF whose concentration is equal to or more than 33% and less than 49% and a second solution having at least one of an alkali, an oxidative acid and HF.

26. (Withdrawn) A semiconductor wafer treatment apparatus, comprising:

a first device to remove with a chemical solution a film of a semiconductor wafer which may have a crystal defect, so as to expose a crystal surface of the semiconductor wafer without being diced, said film constituting a device structure including a device pattern; and

a second device to selectively remove a surface layer of the semiconductor wafer by selective etching to bring the crystal defect into view.

27. (Withdrawn) The semiconductor wafer treatment apparatus according to claim 26, further comprising:

a third device which removes contaminants produced on a surface of the semiconductor wafer due to said selective etching.

28. (Withdrawn) The semiconductor wafer treatment apparatus according to claim 26, further comprising:

a first monitor to observe particles in the chemical solution or in a cleaning liquid.

29. (Withdrawn) The semiconductor wafer treatment apparatus according to claim 26, further comprising:

a second monitor to observe a state of the semiconductor wafer in the chemical solution.

30. (Withdrawn) The semiconductor wafer treatment apparatus according to claim 26, further comprising:

a fourth device which removes particles produced on the surface of the semiconductor wafer due to said selective etching.

31. (Withdrawn) The semi conductor wafer treatment apparatus according to claim 26, further comprising:

a vibrator which generates ultrasonic waves to apply the ultrasonic waves to the semiconductor wafer.

32. (Currently Amended) ~~The~~ A treatment method of ~~the~~ a semiconductor wafer comprising:

treating the semiconductor wafer in a first solution including at least one kind of an oxidative acid and an oxidizing agent;

treating the semiconductor wafer in a second solution including at least one of HF and NH_4F; and

treating the semiconductor wafer in a third solution including at least one of an alkali, an oxidative acid and HF.

33. (Previously Presented) A treatment method of a semiconductor wafer comprising:

treating the semiconductor wafer in a first solution including at least one kind of an oxidative acid and an oxidizing agent;

treating the semiconductor wafer in a second solution including at least one of HF and NH_4F;

selectively etching the semiconductor wafer with a selective etching solution; and

cleaning the semiconductor wafer after the selective etching is finished.

34. (Previously Presented) A treatment method of a semiconductor wafer comprising:

treating the semiconductor wafer in a first solution including at least one kind of an oxidative acid and an oxidizing agent;

treating the semiconductor wafer in a second solution including at least one of HF and NH_4F;

treating the semiconductor wafer in a third solution including at least one of an alkali, an oxidative acid and HF; and

wherein the second solution is an HF solution having a concentration of equal to or more than 33% and less than 49%.

35. (New) A method of inspecting a semiconductor wafer which comprises a film constituting a part of a device structure including a device pattern and which may have a crystal defect, the method comprising:

removing said film with a chemical solution to expose a crystal surface of the semiconductor wafer;

selectively removing a surface layer of the semiconductor wafer by selective etching without dicing to bring the crystal defect into view; and

quantitatively automatically evaluating the crystal defect.

36. (New) A method of developing a semiconductor device, comprising:

removing a film with a chemical solution, said film being formed on a crystal surface of a semiconductor wafer which may have a crystal defect, and said film constituting a part of a device structure including a device pattern, so that the crystal surface of the semiconductor wafer is exposed;

selectively removing a surface layer of the semiconductor wafer by selective etching to bring the crystal defect into view;

quantitatively automatically evaluating the crystal defect over the entire semiconductor wafer; and

optimizing a manufacturing process for the semiconductor device or a shape of said device pattern on a basis of information on the crystal defect obtained from said quantitative evaluation so that the crystal defect is reduced.